

Synopsis of Restorative Resin Composite Systems (Project 05-06) (8/05)

Resin composites have continued to increase in use in recent years. With this increased use has come a plethora of composite resins to the market, to the point where it often causes confusion among federal dental service dentists, technicians and supply personnel. This synopsis provides information obtained from the manufacturers on their various products, and is organized in the form of tables and includes hybrid, microfill and packable systems. Compomer and flowable composite systems were not included.



The composite resin systems are organized in alphabetical order. Additionally, drop-down menus provide links to the resin composite systems that are organized alphabetically by product name or composite type (i.e., hybrid, microfill, packable).

There is a wide diversity of contents for the various kits. They run the gamut from a simple posterior composite available in only one shade, to kits that offer multiple shades in different opacities and include the manufacturer's adhesive bonding system, a dispenser gun, shade guide and a variety of accessories. Keep the kit contents in mind when comparing costs. The variety of shades and opacities may be overwhelming, with no apparent standardization between the systems and both Vita and non-Vita based shades available. Resin composite may be dispensed from syringes, unit-dose tips, or from "spills" with some packable composites. This synopsis features the most inclusive unit-dose system, if available. The advantage of unit-dose tips is potentially easier placement within the preparation and easier infection control procedures. Syringes may be advantageous for larger procedures, such as direct veneers, and may reduce waste at a lower cost per gram of composite. Both retail and government prices (if available) are included. Many manufacturers will state in their instructions that the resin composite systems may be kept at room temperature for short periods (i.e., while in active use) and refrigerated only if necessary for long-term storage. A study by Hondrum and Fernandez found no changes in the mechanical properties of a visible light-activated resin composite after seven years, regardless of storage conditions.¹

Dental treatment facilities should consider the capabilities needed in a resin composite system and carefully evaluate the products available to ensure the appropriate system is purchased. Some manufacturers provide "dentin", "enamel" and characterization materials with shades and levels of translucency that are coordinated with each other. Dentists can layer the composites to reproduce the shade, shape, and translucency of teeth in such a way to regain their original appearance. Simple restorative cases may often be restored in one shade or layer. However, in those cases where a higher level of esthetics is desired, such as larger Class IVs, diastema closures and direct veneers, a multi-layered, multi-opacity process may be indicated.



When reviewing the tables, please keep in mind that the information has been provided by the manufacturers, and not necessarily confirmed by DECS evaluation. In addition, some companies and/or resin composites may not appear on the table. DECS attempted to contact all known manufacturers that market a resin composite system, however, some companies may have failed to respond to our inquiries. Also, some information (e.g., resin components) may be proprietary and may not have been provided by the manufacturer.

Overview of Resin Composite Formulation

Dental resin composites typically contain a mixture of soft, organic resin matrix (polymer) and hard, inorganic filler particles (ceramic). Other components are included to improve the efficacy of the combination and initiate polymerization. The resin matrix consists of monomers, an initiator system, stabilizers and pigments. The inorganic filler consists of particles such as glass, quartz and colloidal silica. The matrix and filler are bonded together with a coupling agent. The performance of resin

composites is dependent upon these basic components.² The recent improvement in these materials has primarily focused on filler technology, but the resin monomers have remained largely unmodified.

The most common monomers used are Bis-GMA, urethane dimethacrylate (UEDMA), and triethylene glycol dimethacrylate (TEGDMA).² Bis-GMA is extremely viscous at room temperature due to hydrogen bonding by hydroxyl groups. Lower viscosity is obtained by mixing Bis-GMA with dimethacrylate monomers (TEGDMA) of lower molecular weight to facilitate the addition of fillers. Addition of the diluents allows greater degree of conversion and more extensive cross-linking to occur between chains – providing a matrix that is more resistant to solvents.^{2,3} However, this increased conversion and crosslinking increases the polymerization shrinkage.⁴ Resin composites undergo volumetric shrinkage of 1.9 to 7.1 percent.^{5,6} The shrinkage in the resin matrix results from the conversion of weak intermolecular attractions to primary covalent bonds.⁷ Polymerization shrinkage and the resultant stress can contribute to gap formation at the margins of restorations. The primary goal of resin composite restorative material research remains to be the improvement or elimination of contraction stress – possibly through low or non-shrinking monomers.

Polymerization shrinkage can also be reduced by increasing the concentration of filler particles since the overall shrinkage depends on the amount of polymer matrix present.² However, the modulus of elasticity of the resin composite is increased at high filler levels and this contributes to higher polymerization stress.⁸ Filler particles drastically improve the mechanical properties of the composite material. Improvement is seen in properties such as tensile and compressive strength, modulus of elasticity, abrasion resistance, radiopacity, esthetics and handling.² As a general rule, the higher the filler loading, the higher the physical properties of the resin composite. Most current resin composites have filler loaded between 50 and 86 percent by weight and 35 to 71 percent by volume.⁹ Filler percentage is best expressed by volume instead of weight because the mechanical properties of composites are mainly dictated by their filler volume fraction.¹⁰ The type of filler directly influences radiopacity which is typically accomplished through the inclusion of elements of high atomic number. Barium and strontium are the most common elements used in filler particles to increase radiopacity.¹¹

It is important that the filler particle bonds to the resin matrix via a coupling agent to improve mechanical and physical properties. The most commonly used coupling agent is an organosilane such as gamma-methacryloxypropyltrimethoxy silane. The silane reduces hydrolytic breakdown and allows stress transfer between the filler and the matrix. The silane agent is a bifunctional molecule with a methacrylate group on one end and a silanol group on the other. The methacrylate end undergoes addition polymerization with the composite resin and the silanol end bonds to the hydroxyl groups on the filler particle via a condensation reaction.²

Various classification systems for resin composites have developed through the years based on particle size.² The traditional system includes traditional, small particle, microfilled and hybrid filler particles.¹²

Originally, crystalline quartz was used as fillers because of its availability, excellent optical properties, and chemical inertness.^{2,13} However, it proved to be extremely hard, a challenge to grind, and difficult to polish with the potential to abrade opposing tooth structure.² The softer polymer would wear away easily, exposing the hard quartz particle, only to be plucked and perpetually roughen the surface.¹³ These traditional quartz particles were produced by grinding or milling and typically were quite large – average 8 to 12 microns in size.²

Microfills were developed to provide better esthetics and polishability.¹³ These tiny particles of silica are only 0.04 microns in diameter and are literally “born in fire” through a pyrolytic process.² The large surface area of these filler particles demands much more resin matrix to wet the surface. This creates extremely high viscosity that limits the percentage filler content possible. In order to maximize filler loading and minimize viscosity, the use of prepolymerized resin and microfiller is used. The heavily filled polymerized resin is ground into 30-65 micron particles and mixed with more resin and microfiller to provide a composite that is filled 30 to 50% by volume. A smoother surface can be produced due to the smaller size of the silica particles.² However, mechanical properties such as strength and stiffness are generally inferior to larger quartz or glass filled composites because of the lower filler content, which often limits their use to non-stress-bearing areas.¹³ Also, microfills are typically radiolucent which also limits

their application to anterior areas. However, some manufacturers have introduced the reinforced microfill. These composites generally have a higher percentage of filler content than traditional microfills and have been marketed for posterior use.

The most common filler today is barium glass with average particle size of 0.6 to 1.0 micron.² A small amount of microfiller is added to improve handling characteristics and reduce stickiness.¹³ To incorporate a maximum amount of filler into a resin matrix, a distribution of particle sizes is necessary. These so-called hybrids are potentially superior because increased filler loading improves the stress transfer between particles in the composite.² The current trend is to maximize filler loading and minimize filler size as with the microhybrids.¹³

Manufacturers have developed "condensable" or "packable" resin composites marketed as amalgam alternatives. "Packable" is a more appropriate term because they are packed rather than condensed. Some manufacturers claim they may be placed in a preparation in bulk and condensed as if they were amalgam. In an attempt to make them an alternative to amalgam, some of the resins are packaged in blister packs that differ by spill size. Laboratory studies have found that, in general, the mechanical properties of packable resin composites are similar to a typical hybrid resin composite and they cannot be predictably polymerized in bulk (e.g., 5 mm).¹⁴ Additionally, some studies have found no difference in the tightness or contours of proximal contacts created with either a packable or hybrid composite.^{15,16}



Other classification systems have been developed over the years due to the difficulty in categorizing the newer complicated formulations of resin composites based on a wide range of filler sizes, loading and compositions. Willems proposed a system based on volume fraction in 1992.¹⁷ A classification system by Bayne and others, based on particle size, was introduced in 1994. The various groups included megafill – 0.5 to 2 millimeters; macrofill – 10 to 100 microns; midifill – 1 to 10 microns; minifill – 0.1 to 1.0 microns; microfill – 0.01 to 0.1 microns and nanofill – 0.005 to 0.01 microns. Most new systems are minifill hybrids with a trend toward nanofillers.⁹ Nanofilled resin composites utilize nanometer-sized particles throughout the resin matrix. Nanohybrids combine nanometer-sized particles with more conventional filler technology.¹⁸

References

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Synopsis of Restorative Resin Composite Systems

Product	3D Direct 	4 Seasons 	Aelite Aesthetic Enamel 	Aelite All-Purpose Body 
Manufacturer	Vident 3150 E. Birch St. Brea, CA 92821 (800) 828-3839 (800) 263-4778 www.vident.com	Ivoclar Vivadent 175 Pineview Dr Amherst, NY 14228 (800) 533-6825 (716) 691-0010 (716) 691-2285 FAX www.ivoclarvivadent.us.com	Bisco, Inc. 1100 W. Irving Park Rd Schaumburg, IL 60193 (800) 247-3368 (847) 534-6000 (800) 959-9550 FAX www.bisco.com	Bisco, Inc. 1100 W. Irving Park Rd Schaumburg, IL 60193 (800) 247-3368 (847) 534-6000 (800) 959-9550 FAX www.bisco.com
Type	Microhybrid	Microhybrid	Reinforced Nanohybrid	Universal Microhybrid
Indications	Inlays, Onlays, Veneers	Class 1 to 5, direct veneers, diastema closures	Enamel layer for Class 1 - 5	Class 1 - 5, veneers, core build-ups, repairs
Kit Contents (most complete)	Complete Kit (#CX88-001) 17 shades, 170 (0.3 gm) tips (0M2, 1M2, 2L2.5, 2M2, 2R2.5, 3L2.5, 3M2, 3R2.5, 4L2.5, 4M2, 5M2, EN2, EN3, WIN, T4, OP0M2, OP3M1), shade guide	Cavifil (unit-dose) Intro Pack (#572865) 40 shades, 168 (0.25 gm) tips (12 dentin: A1, A2, A3, A3.5, A4, A5, A6, B1, B2, C3, D2, XL; 20 enamel: A1, A2, A3, A3.5, A4, B1, B2, B3, B4, C1, C2, C3, C4, D2, D3, D4, XL, XXL, L, M; 3 translucent: C, SC, A; 2 effect: B, W; 3 value: L, M, H), shade guides, dispenser gun	Anterior Unit-dose Kit (#H-85440K) 2 shades, 30 (0.25 gm) tips (Body: A1, A2), 3 shades, 60 (0.25 gm) tips (Enamel: A1, A2, C2, Clear), One- Step Plus adhesive, etchant, BisCover, modeling resin, accessories	Anterior Unit-dose Kit (#H-85440K) 2 shades, 30 (0.25 gm) tips (Body: A1, A2), 3 shades, 60 (0.25 gm) tips (Enamel: A1, A2, C2, Clear), One- Step Plus adhesive, etchant, BisCover, modeling resin, accessories
Retail Price Government Price	\$730.00 \$584.00	\$537.00 \$290.74	See All-Purpose Body and LS Posterior Kits	\$295.00 \$147.50
Shade Availability	10 dentin, 4 enamel, 1 bleach, 2 opaque	40 shades (see above)	16 enamel, 1 bleach, 2 incisal	7 body, 2 opaque
Resin Components	Bis-GMA	Bis-GMA, UDMA, TEGDMA	Enamel: Ethoxylated Bisphenol A Dimethacrylate, BisGMA, TEGDMA	Ethoxylated Bisphenol A Dimethacrylate, TEGDMA
Filler Type	Silica polymer powder 80% wgt/65% vol.	Barium glass, ytterbium trifluoride, Ba-Al fluorsilicate, dispersed silicon dioxide - spheroid mixed oxide 75 -77% wgt./55-58% vol	Glass frit, amorphous silica	Glass frit, amorphous silica
DECS Rating	Not Evaluated	Acceptable	Not Evaluated	Not Evaluated

Product	Aelite LS Packable 	Aelite LS Posterior 	Alert 	Amelogen Plus 
Manufacturer	Bisco, Inc. 1100 W. Irving Park Rd Schaumburg, IL 60193 (800) 247-3368 (847) 534-6000 (800) 959-9550 FAX www.bisco.com	Bisco, Inc. 1100 W. Irving Park Rd Schaumburg, IL 60193 (800) 247-3368 (847) 534-6000 (800) 959-9550 FAX www.bisco.com	Pentron Clinical Technologies 53 N Plains Indrl Rd Wallingford, CT 06492 (800) 551-0283 (203) 265-7397 (877) 677-8844 FAX www.pentron.com	Ultradent Products 505 West 10200 S. South Jordan, UT 84095 (800) 496-8337 (800) 842-9024 FAX www.ultradent.com
Type	Packable Hybrid	Posterior Hybrid	Posterior Condensable	Microhybrid
Indications	Class 1 and 2, core build-ups	Class 1 and 2	Posterior Restorations	Anterior and posterior restorations
Kit Contents (most complete)	Syringe Kit (#H-87210K) 5 shades, 5 (4 gm) syringes (Dentin: A1, A2, A3, Enamel: Neutral, Yellow Gray), One-Step Plus adhesive, etchant, BisCover, accessories	Posterior Unit-dose Kit (#H-83440K) 2 shades, 30 (0.25 gm) tips (Enamel: A1, A2), 3 shades , 45 (0.25 gm) tips (LS Posterior: A1, A2, C2), One-Step Plus adhesive, composite liner, modeling resin, BisCover, accessories	Unit-dose Kit (#N15H) 5 shades, 50 (0.25 gm) tips (A2, A3, A3.5, B1, C2), Flow-It ALC flowable, mixing well, microbrushes, needle tips	Basic Syringe Kit (#3098) 7 shades, 7 (2.5 gm) syringes (A1, A2, A3, A4, A5, B1, C2), shade guide, syringe organizer, PQ1 adhesive, etchant, PermaSeal
Retail Price Government Price	\$199.00 \$99.50	\$250.00 \$125.00	\$94.50 \$80.32	\$119.95 \$101.96
Shade Availability	2 enamel, 3 dentin	8 shades	5 shades	7 dentin, 3 enamel, 3 translucent, 1 opaque
Resin Components	Enamel: Ethoxylated Bisphenol A Dimethacrylate, BisGMA, TEGDMA Dentin: Ethoxylated Bisphenol A Dimethacrylate, TEGDMA	Ethoxylated Bisphenol A Dimethacrylate, TEGDMA	Ethoxylated bisphenol A polycarbonate	Bis-GMA
Filler Type	Glass frit, amorphous silica Enamel shades: 81.5% -86.5% wgt. Dentin shades: 83.5 - 88.5% wgt.	Glass frit, amorphous silica	Silanated bariumboroaluminosilicate glass, "crushed" glass fiber 82% wgt./67% vol.	Barium alumina silicate 75% wgt./61% vol.
DECS Rating	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated

Product	Charisma 	Clearfil AP-X 	Durafill VS 	Embrace Wetbond 
Manufacturer	Heraeus Kulzer, Inc. 99 Business Park Dr Armonk, NY 10504 (800) 431-1785 (914) 273-8600 www.Heraeus-Kulzer-US.com	Kuraray America, Inc. 101 E 52nd St New York, NY 10022 (800) 879-1676 (212) 986-2230 (212) 867-3543 FAX www.kuraraydental.com	Heraeus Kulzer, Inc. 99 Business Park Dr Armonk, NY 10504 (800) 431-1785 (914) 273-8600 www.Heraeus-Kulzer-US.com	Pulpdent Corp. 80 Oakland Street P.O. Box 780 Watertown, MA 02471 (800) 343-4342 (617) 926-6666 (617) 926-6262 FAX www.pulpdent.com
Type	Universal Microhybrid	Universal Microhybrid	Microfill	Cervical Restorative
Indications	Class 1 to 5, veneers, diastema closures	Class 1 to 5, root surface defects	Class 3 to 5, veneers, diastema closures, splinting, orthodontic brackets	Class 5
Kit Contents (most complete)	Assortment Pack (#660000) 8 shades, 80 (0.25 gm) tips (A1, A2, A3, A3.5, B2, B3, C2, incisal), shade guide, mixing pad	Unit-dose Kit (#1740) 4 shades, 40 (0.2 gm) tips (A2, A3, B2, XL), Clearfil SE Bond adhesive, accessories	Assortment Pack (#66000001) 8 shades, 80 (0.25 gm) tips (A1, A2, A3, A3.5, B2, B3, C2, incisal), shade guide, mixing pad	Unit-dose Kit (#EMV) 4 shades, 40 (0.12 mL) tips (A2, A3.5, B2, D2), Seal-n-Shine, accessories
Retail Price Government Price	\$287.68 \$155.34	\$175.00 \$63.75	\$357.27 \$192.96	\$109.00 \$65.00
Shade Availability	12 enamel, 4 dentin, 1 incisal, 1 superlight	14 shades	13 enamel, 4 dentin, 1 incisal, 1 superlight	4 shades
Resin Components	Bis-GMA	Bis-GMA, TEGDMA	Not Provided	Not Provided
Filler Type	Barium aluminum fluoride, dispersed silica dioxide 64% vol.	Barium glass, colloidal silica 85.5% wgt.	Not Provided	65% wgt.
DECS Rating	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated

Product	Epic TMPT	Epic A/P	Esthet-X	Filtek Supreme
Manufacturer	Parkell 155 Schmitt Blvd PO Box 376 Farmingdale, NY 11735 (800) 243-7446 (631) 249-1134 (631) 249-1242 FAX www.parkell.com	Parkell 155 Schmitt Blvd PO Box 376 Farmingdale, NY 11735 (800) 243-7446 (631) 249-1134 (631) 249-1242 FAX www.parkell.com	Dentsply Caulk 38 West Clark Ave P.O. Box 359 Milford, DE 19963 (800) 532-2855 (302) 422-4511 (800) 788-4110 FAX www.dentsply.com	3M Dental Products 3M Center, Bldg 275- 2SE-03 St. Paul, MN 55144 (800) 634-2249 (800) 728-0956 FAX www.3MESPE.com
Type	Microfill	Universal Hybrid	Universal Hybrid	Universal Nanofilled Restorative
Indications	Class 1 - 5	Class 3, 5, and selected Class 1, 2, 4	Class 1 to 5, direct veneers, diastema closures, indirect inlays/onlays	Class 1 to 5
Kit Contents (most complete)	Syringes (3 gm) or 15 unit-dose capsules (0.25 gm) only	Syringes (3 gm) or 15 unit-dose capsules (0.25 gm) only	Unit-dose Complete Kit (#630200) 31 shades, 156 (0.25 gm) tips (A1, A2, A3, A3.5, A4, A2-0, A4-0, W, XL, B1, B2, B2-0, B3, B5, C1, C1-0, C2, C3, C4, C4-0, C5, D2, D3, D3-0, U, CE, WE, YE, AE, GE, W-0), Prime & Bond NT adhesive, dispenser gun, shade guide, polishing points, discs	Professional Kit (#3911P) 10 shades, 100 (0.20 gm) tips (A2B, A2D, A2E, B2B, B3E, C3B, B1E, WB, WE, A3B), 1 (4 gm) syringe (GT, YT), shade selector wheel
Retail Price Government Price	\$32.99 syringe \$43.99 capsules No government pricing	\$32.99 syringe \$43.99 capsules No government pricing	\$658.65 \$397.18	\$508.80 \$285.00
Shade Availability	7 Vita	13 Vita, Incisal, Universal	5 enamel, 19 body, 7 opaque	7 enamel, 13 body, 7 dentin, 3 translucent
Resin Components	Bis-GMA, UDMA, TEGDMA	Bis-GMA, UDMA, TEGDMA, RDMA	Bis-GMA adduct, Bis-EMA adduct, TEGDMA	Bis-EMA, UDMA, Bis-GMA, TEGDMA
Filler Type	TMPT, SiO ₂ 47-49% wgt.	TMPT, Ba/Si, SiO ₂ 78-79% wgt.	Barium fluoro aluminum boro silicate glass; 76% wgt./60% vol	SiO ₂ Nanosilica filler, ZrO ₂ /SiO ₂ nanoclusters 78.5% wgt./59% vol.
DECS Rating	Not Evaluated	Not Evaluated	Acceptable	Acceptable

Product				
Manufacturer	3M Dental Products 3M Center, Bldg 275-2SE-03 St. Paul, MN 55144 (800) 634-2249 (800) 728-0956 FAX www.3MESPE.com	3M Dental Products 3M Center, Bldg 275-2SE-03 St. Paul, MN 55144 (800) 634-2249 (800) 728-0956 FAX www.3MESPE.com	SDI 729 N Rte 83 Ste 315 Bensenville, IL 60106 (800) 228-5166 (630) 238-8300 (630) 238-9200 FAX www.sdi.com.au	GC America 3737 W. 127 th St Alsip, IL 60803 (800) 323-7063 (708) 597-0900 (708) 371-5103 FAX www.gcamerica.com
Type	Universal Hybrid	Universal Hybrid	Microhybrid	Microfilled Hybrid
Indications	Class 1 to 5, core build-up, splinting, indirect inlays, onlays, veneers	Class 1 to 5, core build-up, splinting, indirect inlays, onlays, veneers	Class 1 to 5, veneers, inlays/onlays. core build-ups	Class 1 to 5
Kit Contents (most complete)	Capsule Kit (#5905T) 6 shades, 60 (0.20 gm) tips (A2, A3, A4, B2, C2, D3), Scotchbond MP adhesive, etchant, accessories	Introductory Capsule Kit (#6021) 5 shades, 50 (0.20 gm) tips (A2, A3, B0.5, B2, C3), Single Bond adhesive, etchant, accessories	Unit-dose Intro Kit (#7030001) 6 shades, 60 (0.25 gm) tips (A2, A3, A3.5, B4, C4, D3), Stae adhesive, etchant, disposable tips, applicator	Complete Kit (#423001) 26 shades, 106 (0.25 gm) tips (A1, A2, A3.5, A4, B2, B3, CV, CVD, AO2, AO3, AO4, DT, NT, BW, WT, CT, GT, CVT, P-A1, P-A2, P-A3, P-A3.5, P-WT, P-NT), shade guide, dispenser gun, mixing pad
Retail Price Government Price	\$389.20 \$215.80	\$257.70 \$136.15	\$215.00 \$103.28	\$366.00 \$220.00
Shade Availability	15 shades	13 enamel, 1 incisal, 1 dentin	13 enamel, 8 dentin, bleach, incisal	Anterior: 11 standard, 3 opaque, 6 translucent Posterior: 4 standard, 2 translucent
Resin Components	Bis-EMA, TEGDMA	Bis-EMA, UDMA, Bis-GMA, TEGDMA	UDMA, DDDMA	Urethane dimethacrylate co-monomer matrix
Filler Type	Zirconia/silica particles	Zirconia/silica particles 82% wgt./60% vol.	Strontium alumino silicate 77% wgt./63% vol.	Silica, pre-polymerized fillers, fluoro-alumino-silicate glass (posterior only)
DECS Rating	Not Evaluated	Acceptable	Not Evaluated	Acceptable

Product	Heliomolar 	Heliomolar HB 	Helio-Progress 
Manufacturer	Ivoclar Vivadent 175 Pineview Dr Amherst, NY 14228 (800) 533-6825 (716) 691-0010 (716) 691-2285 FAX www.ivoclarvivadent.us.com	Ivoclar Vivadent 175 Pineview Dr Amherst, NY 14228 (800) 533-6825 (716) 691-0010 (716) 691-2285 FAX www.ivoclarvivadent.us.com	Ivoclar Vivadent 175 Pineview Dr Amherst, NY 14228 (800) 533-6825 (716) 691-0010 (716) 691-2285 FAX www.ivoclarvivadent.us.com
Type	Microfill	Packable Microfill	Microfill
Indications	Class 1 to 5	Primary and permanent posterior restorations	Anterior restorations
Kit Contents (most complete)	Cavifil (unit-dose) Assortment (#550575) 8 shades, 40 (0.25 gm) tips (105, 110, 140, 210, 410, 510, 110T, 420T), shade guide	Cavifil (unit-dose) Intro Kit (#560193) 9 shades, 60 (0.25 gm) tips (A1, A2, A3, B1, B2, C2, D2, A1T, GE), Heliomolar Flow, etchant, Excite bonding agent, composite instrument, polishing tips, shade guide, accessories	Single syringes only (2.5 gm)
Retail Price Government Price	\$131.25 \$52.79	\$265.00 \$120.87	\$52.40 per syringe \$28.98 per syringe
Shade Availability	11 shades	11 shades	7 shades
Resin Components	Bis-GMA, UDMA, Decandiol dimethacrylate	Bis-GMA, UDMA, Decandiol dimethacrylate	Bis-GMA, UDMA, Decandiol dimethacrylate
Filler Type	Dispersed silica - silanized copolymer, ytterbium trifluoride 76.5% wgt./64% vol	Dispersed silicon dioxide, ytterbium trifluoride, copolymers 77% wgt./46% vol	Dispersed silica, silanized and copolymer 74% wgt.
DECS Rating	Not Evaluated	Acceptable	Not Evaluated

Product	Herculite XRV	Ice	Matrixx Anterior Hybrid
Manufacturer	Kerr Corp. 1717 W. Collins Ave Orange, CA 92867 (800) 537-7123 (714) 516-7400 (714) 516-7633 FAX www.kerrdental.com	SDI 729 N Rte 83 Ste 315 Bensenville, IL 60106 (800) 228-5166 (630) 238-8300 (630) 238-9200 FAX www.sdi.com.au	Discus Dental 8550 Higuera St Culver City, CA 90232 (800) 422-9448 (310) 845-8260 (310) 845-1537 FAX www.discusdental.com
Type	Universal Hybrid	Nanohybrid	Anterior Hybrid
Indications	Class 1 to 5	Class 1 to 5, veneers, inlays/onlays. core build-ups	Anterior/Posterior
Kit Contents (most complete)	Unit-dose Kit (#30890) 10 shades, 160 (0.25 gm) tips (Enamel: A1, A2, A3, A3.5, B1, B3, C2, C3, D2, D3; Dentin: A2, B1, C2, D2; Med & Light Incisal) Optibond Solo Plus adhesive, etchant gel, applicators, tips, mixing wells	Unit-dose Intro Kit (#8400103) 6 shades, 60 (0.25 gm) tips (A1, A2, A3, A3.5, B1, OA2), Stae adhesive, etchant, disposable tips, applicator	Syringes (4.5 gm) or 20 unit-dose capsules (0.25 gm) only
Retail Price Government Price	\$564.15 \$266.00	\$283.00 \$108.00	Unit-dose capsules \$45.00 \$14.25
Shade Availability	Unit-dose: 16 enamel, 7 dentin, 2 incisal Syringe: 16 enamel, 16 dentin, 3 cervical, 2 incisal	14 enamel, 3 dentin, bleach, incisal	3 bleach, 13 dentin, 1 white
Resin Components	Bis-GMA, EBADMA, TEGDMA	UDMA, BisEMA, TEGDMA	Bis-GMA
Filler Type	Barium aluminoborosilicate 79% wgt./59% vol.	Strontium alumino silicate 77% wgt./61% vol.	Ba-glass 81% wgt./65% vol.
DECS Rating	Not Evaluated	Not Evaluated	Not Evaluated

Product	Matrixx Anterior Microfill 	Matrixx Posterior Hybrid 	Miris 
Manufacturer	Discus Dental 8550 Higuera St Culver City, CA 90232 (800) 422-9448 (310) 845-8260 (310) 845-1537 FAX www.discusdental.com	Discus Dental 8550 Higuera St Culver City, CA 90232 (800) 422-9448 (310) 845-8260 (310) 845-1537 FAX www.discusdental.com	Coltene Whaledent 235 Ascot Parkway Cuyahoga Falls, OH 44223 (800) 221-3046 (330) 916-8800 (330) 916-7077 FAX www.coltenewhaledent.com
Type	Anterior Microfill	Posterior Hybrid	Microhybrid
Indications	Anterior	Posterior	Class 1 to 5, direct veneers, diastema closures, indirect inlays/onlays
Kit Contents (most complete)	Syringes (4.5 gm) or 20 unit-dose capsules (0.25 gm) only	Syringes (4.5 gm) or 20 unit-dose capsules (0.25 gm) only	Unit-dose Set (#C8465) 17 shades, 81 (0.25 gm) tips (S1-S7, WR, WB, NR, NT, IR, IT, B); 3 (2.3 gm) syringes (W, WO, G), shade guide, oral separator, accessories
Retail Price Government Price	Unit-dose capsules \$45.00 \$14.25	Unit-dose capsules \$45.00 \$14.25	\$210.96 \$116.03
Shade Availability	3 bleach, 13 dentin, 3 incisal	8 dentin	7 dentin, 6 enamel, 4 effect
Resin Components	UDMA	Bis-GMA, UDMA	BisGMA, BisEMA, TEGDMA
Filler Type	Ba-glass, prepolymerized filler 60% wgt./57% vol.	Ba-glass 84% wgt./67% vol.	Strontium-barium borosilicate glass 74% wgt./59% vol.
DECS Rating	Not Evaluated	Not Evaluated	Not Evaluated

Product	P-60 	Palfique Estelite Sigma 	Point 4 
Manufacturer	3M Dental Products 3M Center, Bldg 275-2SE-03 St. Paul, MN 55144 (800) 634-2249 (800) 728-0956 FAX www.3MESPE.com	J. Morita USA 9 Mason Irvine, CA 92618 (888) 566-7482 (949) 581-9600 (949) 465-1095 FAX www.jmoritausa.com	Kerr Corp. 1717 W. Collins Ave Orange, CA 92867 (800) 537-7123 (714) 516-7400 (714) 516-7633 FAX www.kerrdental.com
Type	Packable	Submicron Universal Composite	Universal Hybrid
Indications	Class 1 and 2	Class 1 to 5	Class 1 to 5
Kit Contents (most complete)	Introductory Syringe Kit (#4720) 3 shades, 3 (4 gm) syringes (A3, B2, C2), Single Bond adhesive, etchant, accessories	Unit-dose Intro Kit (#26-11982) 8 shades, 40 (0.2 gm) tips (A1, A2, A3, A3.5, B1, B2, C2, OA2), brush handle mixing tips	Unit-dose Kit (#29685) 5 shades, 50 (0.2 gm) tips (A2, A3, A3.5, XL2, T1), Optibond Solo Plus, etchant gel, Optiguard surface sealant, dispenser gun, tips, applicators
Retail Price Government Price	\$207.30 \$112.75	\$160.00 \$140.00	\$291.65 \$145.35
Shade Availability	3 shades	18 shades	16 enamel, 8 dentin, 3 extra light, 3 translucent
Resin Components	Bis-EMA, UDMA, Bis-GMA, TEGDMA	Bis-GMA, TEGDMA	Bis-GMA, UDMA, EBADMA, TEGDMA
Filler Type	Zirconia/silica particles 61% vol.	Submicron spherical 82% wgt./71% vol.	Barium aluminoborosilicate 77% wgt./59% vol.
DECS Rating	Acceptable	Not Evaluated	Acceptable

Product	Premise 	Prisma APH	Prodigy 	Prodigy Condensable 
Manufacturer	Kerr Corp. 1717 W. Collins Ave Orange, CA 92867 (800) 537-7123 (714) 516-7400 (714) 516-7633 FAX www.kerrdental.com	Dentsply Caulk 38 West Clark Ave P.O. Box 359 Milford, DE 19963 (800) 532-2855 (302) 422-4511 (800) 788-4110 FAX www.dentsply.com	Kerr Corp. 1717 W. Collins Ave Orange, CA 92867 (800) 537-7123 (714) 516-7400 (714) 516-7633 FAX www.kerrdental.com	Kerr Corp. 1717 W. Collins Ave Orange, CA 92867 (800) 537-7123 (714) 516-7400 (714) 516-7633 FAX www.kerrdental.com
Type	Universal Nanofilled Restorative	Universal Hybrid	Hybrid	Condensable
Indications	Class 1 to 5	Class 1 to 5, direct veneers, diastema closures	Class 1 to 5	Posterior
Kit Contents (most complete)	Unit-dose Master Kit (#32612) 16 shades, 160 (0.2 gm) tips (A1, A2, A3, A3.5, B1, C2, D2, XL1, XL2, Clear, Amber, Gray, A3-O, A3.5-O, A3 & A3.5 Packable), Optibond Solo Plus adhesive, etchant gel or SE primer, Optiguard surface sealant, shade guide, polishing kit, applicators, tips, mixing wells	Unit-dose and syringe refills only (XL, B1, B2, C1, C2, A2, A3.5, C2-0, C3, C4; B82)	Unit-dose Kit (#30892) 5 shades, 50 (0.2 gm) tips (A2, A3, B1, C2, D2), Optibond Solo Plus adhesive, etchant gel, Optiguard surface sealant, dispenser gun, tips, applicators	Unit-dose Kit (#30902) 5 shades, 50 (0.2 gm) tips (A1, A2, A3, B1, C1), Optibond Solo Plus adhesive, etchant gel, Optiguard surface sealant, dispenser gun, tips, applicators
Retail Price Government Price	\$435.00 \$247.00	30 Compules Refill \$125.75 \$75.83	\$319.15 \$148.77	\$316.65 \$150.10
Shade Availability	18 body, 8 opaque, 4 translucent, 4 packable	11 shades	16 enamel, 1 dentin, 1 translucent, 1 extra light	7 enamel, 1 extra light
Resin Components	Ethoxylated bis-phenol A dimethacrylate, TEGDMA	Urethane modified Bis-GMA, TEGDMA, EBADMA	Bis-GMA, TEGDMA, EBADMA	Bis-GMA, TEGDMA, EBADMA
Filler Type	Prepolymerized filler, barium glass, silica nanoparticles 84% wgt./69% vol.	Barium glass, fumed silica 77.5% wgt.	Barium aluminum borosilicate glass, silica particles 79% wgt./59% vol.	Barium aluminum borosilicate glass, silica particles 80% wgt./61.7% vol.
DECS Rating	Acceptable	Not Evaluated	Recommended	Marginal

Product	Quixx 	Rename Hybrid 	Rename Microfill 	Rename Posterior 
Manufacturer	Dentsply Caulk 38 West Clark Ave P.O. Box 359 Milford, DE 19963 (800) 532-2855 (302) 422-4511 (800) 788-4110 FAX www.dentsply.com	Cosmedent 401 N. Michigan Ave. Suite 2500 Chicago, IL 60611 (800) 621-6729 (321) 644-9752 FAX www.cosmedent.com	Cosmedent 401 N. Michigan Ave. Suite 2500 Chicago, IL 60611 (800) 621-6729 (321) 644-9752 FAX www.cosmedent.com	Cosmedent 401 N. Michigan Ave. Suite 2500 Chicago, IL 60611 (800) 621-6729 (321) 644-9752 FAX www.cosmedent.com
Type	Posterior Restorative	Universal Microhybrid	Microfill	Posterior Hybrid
Indications	Class 1 and 2	Class 1 to 5, direct veneers, repairs, splinting, provisionals	Class 3, 5, direct veneers, repairs, splinting, provisionals	Posterior restorations
Kit Contents (most complete)	Unit-dose Starter Kit (#631200) 1 shade, 40 (0.28 gm) tips (U), Xeno III adhesive	Unit-dose Kit (#606200) 11 shades, 220 (0.25 gm) tips (A1, A2, A3, A4, B2, B3, C2, C4, clear occlusal, white occlusal, incisal)	Basic Syringe Kit (#607000) 11 shades, 11 (4 gm) syringes (A1, A2, A3, A4, B1, B3, C2, C4, D3, LI, MI)	Unit-dose Kit (#610201) 7 shades, 140 (0.25 gm) tips (Body:A1, A2, A3, Occlusal: A1, A2, A3, Clear)
Retail Price Government Price	\$161.90 \$97.64	\$638.10 \$382.80	\$579.50 \$347.70	452.95 \$271.77
Shade Availability	1 universal	17 body, 2 occlusal, 1 incisal	24 body, 3 incisal	3 body, 4 occlusal
Resin Components	UDMA, TEGMA, Carboxylic acid modified dimethacrylate	Diurethane dimethacrylate, bis- GMA, butanediol dimethacrylate	Diurethane dimethacrylate, bis- GMA, butanediol dimethacrylate	Diurethane dimethacrylate, bis- GMA, butanediol dimethacrylate
Filler Type	Strontium aluminum sodium fluoride phosphate silicate glass 86% wgt./66% vol.	Silanized silica, prepolymerized composite, radiopaque glass 75% wgt./56% vol.	Silanized silica, prepolymerized composite, acrylic polymer 70% wgt./60% vol.	Silanized silica, prepolymerized composite, radiopaque glass
DECS Rating	Not Evaluated	Not Evaluated	Not Evaluated	Not Evaluated

Product	Rok	Simile	Solitaire 2	Surefil
Manufacturer	<p>SDI 729 N Rte 83 Ste 315 Bensenville, IL 60106 (800) 228-5166 (630) 238-8300 (630) 238-9200 FAX www.sdi.com.au</p>	<p>Pentron Clinical Technologies 53 N Plains Indrl Rd Wallingford, CT 06492 (800) 551-0283 (203) 265-7397 (877) 677-8844 FAX www.pentron.com</p>	<p>Heraeus Kulzer, Inc. 99 Business Park Dr Armonk, NY 10504 (800) 431-1785 (914) 273-8600 www.Heraeus-Kulzer-US.com</p>	<p>Dentsply Caulk 38 West Clark Ave P.O. Box 359 Milford, DE 19963 (800) 532-2855 (302) 422-4511 (800) 788-4110 FAX www.dentsply.com</p>
Type	Posterior Hybrid	Universal Nano-hybrid	Condensable Composite	Posterior Condensable
Indications	Posterior restorations, core and build-up, splinting	Class 1 - 5	Class 1, 2, 5, core build-ups	Class 1 and 2, indirect inlays/onlays
Kit Contents (most complete)	Unit-dose Intro Kit (#7030001) 6 shades, 60 (0.15 gm) tips (A2, A3, A3.5, B1, B2, C2), Stae adhesive, etchant, disposable tips, applicator	Unit-dose Kit (#N56C) 10 shades, 100 (0.25 gm) tips (A1, A2, A3, A3.5, B1, B2, B3, C2, UO, Clear)	Assortment Pack (#66001628) 8 shades, 80 (0.25 gm) tips (A1, A2, A3, A3.5, B2, B3, C3, incisal), shade guide, mixing pad	Unit-dose Operatory Kit (#645003) 3 shades, 15 (0.18-, 0.28-, & 0.4-gm spill) blister packs (A, B, C shades), Prime & Bond NT adhesive, etchant gel
Retail Price Government Price	\$121.50 \$64.80	\$239.95 \$203.96	\$328.28 \$177.25	\$286.15 \$72.56
Shade Availability	6 enamel	25 shades	9 enamel, 1 incisal	3 body
Resin Components	UDMA	Difunctional methacrylates of PCBisGMA, BisGMA, UDMA, HDDMA	Bis-GMA, UDMA, TEGDMA	Urethane modified Bis-GMA, TEGMA
Filler Type	Strontium alumino silicate 77% wgt./63% vol.	Barium boro-silicate glass, nano-particulated silica, zirconium silicate 75% wgt./68% vol.	Proprietary, resin-trapping, matrix-integrating filler particles 75% vol.	Barium fluoro aluminum boro silicate glass, fumed silica 81.5% wgt./65% vol.
DECS Rating	Not Evaluated	Not Evaluated	Not Evaluated	Marginal

Product	Synergy 	Synergy Compact 	Tetric 
Manufacturer	Coltene Whaledent 235 Ascot Parkway Cuyahoga Falls, OH 44223 (800) 221-3046 (330) 916-8800 (330) 916-7077 FAX www.coltenewhaledent.com	Coltene Whaledent 235 Ascot Parkway Cuyahoga Falls, OH 44223 (800) 221-3046 (330) 916-8800 (330) 916-7077 FAX www.coltenewhaledent.com	Ivoclar Vivadent 175 Pineview Dr Amherst, NY 14228 (800) 533-6825 (716) 691-0010 (716) 691-2285 FAX www.ivoclarvivadent.us.com
Type	Microhybrid	Packable	Microhybrid
Indications	Anteriors	Posterior	Class 1 to 5
Kit Contents (most complete)	Unit-dose Set (#C7840) 6 duo shades, 60 (0.25 gm) tips (A1/D2, A3.5/B3, A4/M5, A3/D3, C2/C3); One Coat adhesive, etchant, brushes, shade guide	Unit-dose Set (#C7861) 4 duo shades, 40 (0.25 gm) tips (A2/B2, A3/D3, A3.5/B3)	Single (0.25 gm) cavifil (unit-dose) or single (4 gm) syringe only
Retail Price Government Price	\$315.44 \$173.49	\$157.92 \$86.86	Call company for pricing details
Shade Availability	6 enamel with 2-in-1 shading, super white, transparent	3 dentin with 2-in-1 shading	13 shades
Resin Components	BisGMA, BisEMA, TEGDMA	BisGMA, BisEMA, TEGDMA	Bis-GMA, UDMA, TEGDMA
Filler Type	Barium glass, silanized; amorphous silica, hydrophobed 77% wgt./58% vol.	Barium glass, silanized; amorphous silica, hydrophobed 77% wgt./58% vol.	Barium glass, ytterbium trifluoride, dispersed silicon dioxide, spheroid mixed oxide 81% wgt./62% vol.
DECS Rating	Not Evaluated	Not Evaluated	Not Evaluated

Product	Tetric Ceram HB 	Tetric EvoCeram 	TPH ³ 
Manufacturer	Ivoclar Vivadent 175 Pineview Dr Amherst, NY 14228 (800) 533-6825 (716) 691-0010 (716) 691-2285 FAX www.ivoclarvivadent.us.com	Ivoclar Vivadent 175 Pineview Dr Amherst, NY 14228 (800) 533-6825 (716) 691-0010 (716) 691-2285 FAX www.ivoclarvivadent.us.com	Dentsply Caulk 38 West Clark Ave P.O. Box 359 Milford, DE 19963 (800) 532-2855 (302) 422-4511 (800) 788-4110 FAX www.dentsply.com
Type	Packable Hybrid	Nano-Hybrid	Universal Hybrid
Indications	Primary and permanent posterior restorations	Class 1 to 5	Class 1 to 5, direct veneers, diastema closures, indirect inlays/onlays
Kit Contents (most complete)	Cavifil (unit-dose) Intro Kit (#558511) 4 shades, 20 (0.25 gm) tips (A2, A3, B2, C2), Tetric Flow, Excite bonding agent, etchant, applicators, shade guide, accessories	Cavifil (unit-dose) System Pack (#590285) 8 shades, 40 (0.25 gm) tips (A1, A2, A3, A3.5, A4, B1, B1-I, B2, B3, C1, C2, C2-0, C3, C4, D3, LYG, LB, DB, L, LG, XL, CE, YE, BW, DY, XGB), Prime & Bond NT adhesive, dispenser gun, etchant gel, shade guide, polishing points, discs	Unit-dose Complete Kit (#642700) 26 shades, 96 (0.25 gm) tips (A1, A2, A3, A3.5, A4, B1, B1-I, B2, B3, C1, C2, C2-0, C3, C4, D3, LYG, LB, DB, L, LG, XL, CE, YE, BW, DY, XGB), Prime & Bond NT adhesive, dispenser gun, etchant gel, shade guide, polishing points, discs
Retail Price Government Price	\$130.00 \$57.50	\$219.60 \$87.99	\$415.90 \$250.80
Shade Availability	6 shades	19 shades	3 enamel, 22 body, 1 opaque
Resin Components	Bis-GMA, UDMA, TEGDMA	Dimethacrylates	Urethane modified Bis-GMA, TEGDMA
Filler Type	Barium glass, Ba-Al fluorsilicate glass, ytterbium trifluoride, dispersed silicon dioxide and spheroid mixed oxide 78% wgt./58% vol.	Barium glass, ytterbium trifluoride, mixed oxide, prepolymers 82-83% wgt./68% vol.	Barium fluoro aluminum boro silicate glass, fumed silica 76% wgt./58% vol
DECS Rating	Not Evaluated	Excellent	Acceptable

Product	True Vitality	Venus	Virtuoso Packable
Manufacturer	Den-Mat Corporation 2727 Skyway Dr Santa Maria, CA 93455 (800) 445-0345 (805) 922-8491 (805) 349-2600 FAX www.denmat.com	Heraeus Kulzer, Inc. 99 Business Park Dr Armonk, NY 10504 (800) 431-1785 (914) 273-8600 www.Heraeus-Kulzer-US.com	Den-Mat Corporation 2727 Skyway Dr Santa Maria, CA 93455 (800) 445-0345 (805) 922-8491 (805) 349-2600 FAX www.denmat.com
Type	Universal Hybrid	Microhybrid	Packable Micro-Hybrid
Indications	Class 1 to 5, indirect inlays/onlays, provisional crowns/FPDs	Class 1 to 5, veneers, diastema closures	Class 1 and 2
Kit Contents (most complete)	Syringe Kit (#032555000) 6 shades, 6 (2.75 gm) syringes (A1, A2, A3, A3.5, C1, D2), Tenure adhesive, etchant, bond enhancer, release agent, initiator, cement, curing test rings, accessories	Master's Kit (#66007955) 27 shades, 270 (0.25 gm) tips (A1, A2, A2.5, A3, A3.5, A4, A5, B1, B2, B3, C2, C3, C4, D2, D3, SB1, SB2, T1, T2, T3, OA2, OA3, OA3.5, OB2, OC2, OD2, SBO), shade guide, flowable composite, effect, Gluma Comfort Bond adhesive, etchant	Spill Kit (#030381350) 4 shades, 80 spills (A2, A3, A3.5, C2), Tenure adhesive, etchant, bond enhancer, curing test rings, accessories
Retail Price Government Price	\$289.00 \$231.20	\$844.76 \$456.17	\$199.00 \$159.20
Shade Availability	14 shades	17 enamel, 7 dentin, 3 translucent	4 shades
Resin Components	Ethoxylated bisphenol A dimethacrylate	Bis-GMA, TEGDMA	Ethoxylated bisphenol A dimethacrylate, urethane dimethacrylate, TEGDMA
Filler Type	Barium glass, microfill silica 60% wgt./42% vol	Barium aluminum boron fluoride silica glass, dispersed silicon dioxide 78% wgt./61% vol.	Barium glass, microfill silica 74% wgt./51% vol
DECS Rating	Not Evaluated	Acceptable	Not Evaluated

Product	Virtuoso Sculptable 	Virtuoso Universal 	Vitalescence 
Manufacturer	Den-Mat Corporation 2727 Skyway Dr Santa Maria, CA 93455 (800) 445-0345 (805) 922-8491 (805) 349-2600 FAX www.denmat.com	Den-Mat Corporation 2727 Skyway Dr Santa Maria, CA 93455 (800) 445-0345 (805) 922-8491 (805) 349-2600 FAX www.denmat.com	Ultradent Products 505 West 10200 S. South Jordan, UT 84095 (800) 496-8337 (800) 842-9024 FAX www.ultradent.com
Type	Microfill	Nanofill Hybrid	Microhybrid
Indications	Anterior, class 5, veneering, resurfacing	Class 1 to 5, direct veneers	Anterior and posterior restorations
Kit Contents (most complete)	Unit-dose Kit (#030381650) 9 shades, 90 (0.25 gm) tips (A1, A2, A3, A3.5, B0, B1, C2, C4, I, BO), curing rings	Unit-dose Intro Kit (#030381950) 3 shades, 30 (0.25 gm) tips (A2, A3.5, enamel), Tenure adhesive, flowable (A2), Gloss-N-Seal, applicators, dappen dishes, curing rings	Master's Syringe Kit (#500) 23 shades, 23 (2.5 gm) syringes (Dentin: A1, A2, A3, A3.5, A4, A5, B1, B2, Enamel: OW, OS, PF, PN, PA, PS, TF, TM, TS, TB, TO, TG, TI, TY, TA), PQ1 adhesive, etchant, PermaSeal, Diamond Polish, shade guide, syringe organizer
Retail Price Government Price	\$249.00 \$199.20	\$99.00 \$79.20	\$699.95 \$594.95
Shade Availability	9 shades	12 shades	16 enamel, 18 dentin
Resin Components	Ethoxylated bisphenol A dimethacrylate, urethane dimethacrylate	Ethoxylated bisphenol A dimethacrylate, urethane dimethacrylate, TEGDMA	Bis-GMA
Filler Type	Microfine silica 48% wgt./33% vol	Barium glass, microfine silica 74% wgt./51% vol	Barium alumina silicate 75% wgt./58% vol.
DECS Rating	Not Evaluated	Not Evaluated	Marginal

Product	Vitalescence HV 	Zenith A/P Hybrid 
Manufacturer	Ultradent Products 505 West 10200 S. South Jordan, UT 84095 (800) 496-8337 (800) 842-9024 FAX www.ultradent.com	Zenith/DMG Foremost Dental LLC 242 South Dean St Englewood, NJ 07631 (800) 662-6383 (201) 894-5500 (201) 894-0213 FAX www.zenithdmg.com
Type	Microhybrid	Hybrid
Indications	Posterior restorations	Class 3, 5
Kit Contents (most complete)	HV Enamel Syringe Kit (#3141) 5 shades, 5 (2.5 gm) syringes (PF, PN, PS, TM, TF), shade guide	Hybrid Syringe Kit (#61180) 4 shades, 5 (3 gm) syringes (2xU, L, Y, LG), mixing pad, shade guide
Retail Price Government Price	\$119.95 \$101.96	\$103.25 \$56.65
Shade Availability	6 enamel	4 shades
Resin Components	Bis-GMA	Urethane dimethacrylate
Filler Type	Not provided	Glass powder, silica 60% vol
DECS Rating	Not Evaluated	Not Evaluated